Thermometer App

Software Requirements Specification

1.0

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**Table of Contents**

1. General Description 1

2. Specific Requirements 1

2.1 Main View 1

2.2 Settings View 2

2.3 Web API 3

# 1. General Description

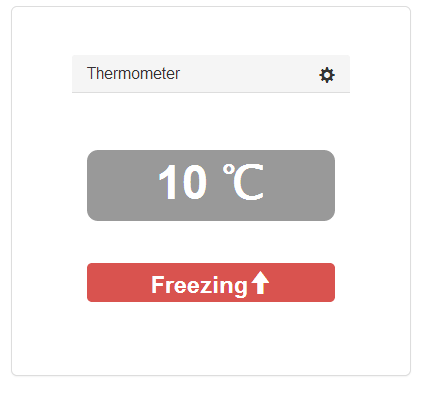
This document describes Software Requirement Specification (SRS) for the project Thermometer App. This project is for the WUBS UI Thermometer Assignment, the content of SRS is based on the problem description in that document.

Thermometer App is a web-based application, its main function is to show temperature on the default page, and with some indicators for freezing and boiling status. User can change these thresholds through settings, and those settings also include other attributes, such as temperature format (Fahrenheit and Celsius), and frequency of sending request to server to temperature from server.

# 2. Specific Requirements

Thermometer App is a single page application, its main view show temperature and some indicators, and refreshes it frequently. And there is another view to allow user to change settings for main view.

## 2.1 Main View



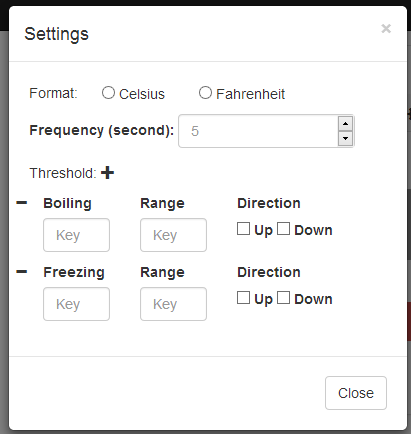
There are 3 rows in the main view,

1. Title bar, this row display title ‘Thermometer’, and there is config icon at right end, user click it to go to setting view to change settings.
2. Temperature row, this row display temperature, in Fahrenheit or Celsius format, and this temperature is refreshed frequently. The format can be changed in setting view. The refresh frequency can also be changed in setting view.
3. Indicator row, this row display indicators when temperature reaches any threshold, which is defined in setting view. Indicators include:
4. Threshold name
5. Direction

There are some rules for showing indicator:

1. Indicator only show when current temperature reach any threshold
2. In the first time of reach any threshold, show model overlay to warring user, and pause refresh temperature.
3. Each threshold has below attributes:
4. Threshold point, the temperature of threshold
5. Fluctuation range, if the temperature is in the range, the indicator keeps same.
6. Direction, it indicates the threshold was reached from a certain direction.
7. Our system may have multiple thresholds, we have 2 default thresholds, as below, and user can add/delete through setting view.
8. Freezing, its threshold point is 0, its fluctuating range is =/- 0.5, and no direction.
9. Boiling, its threshold point is 100, its fluctuating range is =/- 0.5, and no direction.

## 2.2 Settings View



This view shows all settings, these settings allow user change behaviors of main view. They include:

1. Format, switch temperature format between Fahrenheit and Celsius. Default is Celsius.
2. Frequency, it is decide interval seconds used by main view to retrieve temperature from server. Default is 5 seconds.
3. Thresholds, this part display array of threshold item, they will affect indicators on the main view, and each threshold item include below attributes:
   1. Threshold point, the temperature of threshold
   2. Fluctuation range, if the temperature is in the range, the indicator keeps same.
   3. Direction, it indicates the threshold was reached from a certain direction.
4. User can add new threshold settings by click ‘+’, we will ask user to input threshold name first, then show new threshold items with default values, they are:
5. Threshold point, 0
6. Fluctuation range, 0.5
7. Direction, no value.
8. User can delete exist threshold by clicking ‘-‘ at front of each threshold settings.

## 2.3 Web API

We need web service to get temperature, for this application, this service will return random number to simulate changed temperature.